No Action Alternative

Under the No Action Alternative, ambient noise levels would remain unchanged in the vicinity of TA-3. Potential noise from operation, demolition, and construction activities associated with the Proposed Action would not occur.

4.1.6 Geology

Proposed Action

The environmental consequences to this resource would be the same for both Option A and Option B. The local geologic setting is expected to have minimal effects on the Proposed Action. Seismic activity may affect the new CTGs, however, the probability of a seismic event is very low.

The entire TA-3 area lies within the Diamond Drive Graben (a basin bounded by two faults) which is bounded by the Pajarito Fault on the west and the Rendija Canyon Fault on the east (Gardner et al., 1999). As such, the Proposed Action is in an area of generally higher potential for seismic surface rupture relative to locations farther removed from the Pajarito Fault Zone (Gardner et al., 2001). The location for the proposed CTGs is greater than 50 ft (15 m) from any known fault line (Figures 7 and 8). However, probabilistic analysis of 1 in 10,000 year seismic events suggests that significant seismic events are only expected to occur along, or on, the main trace of the Pajarito Fault (Gardner et al., 2001) west of State Road 501. Even though probabilities are low, the Pajarito Fault Zone must be considered active or "capable" in the definitions of 10 CFR 100 Appendix A.

A surface rupturing seismic event within or near the Pajarito Fault Zone could have consequences for the new CTGs and other structures within the area. As such, the new CTGs may require additional structural reinforcements to meet current building codes with respect to seismic hazards.

No Action Alternative

Under the No Action Alternative, the new CTGs would not be installed. Therefore, there would be no effects to consider.

4.1.7 Human Health

Proposed Action

This section considers the health of LANL and non-LANL construction and maintenance workers. These two categories are considered in this EA because each category of worker would either be involved in the installation or the maintenance of the new CTGs at LANL under the Proposed Action. LANL workers would be the primary users of the proposed CTGs. Members of the general public unaffiliated with LANL are not considered because they would not be allowed access to the proposed CTGs.

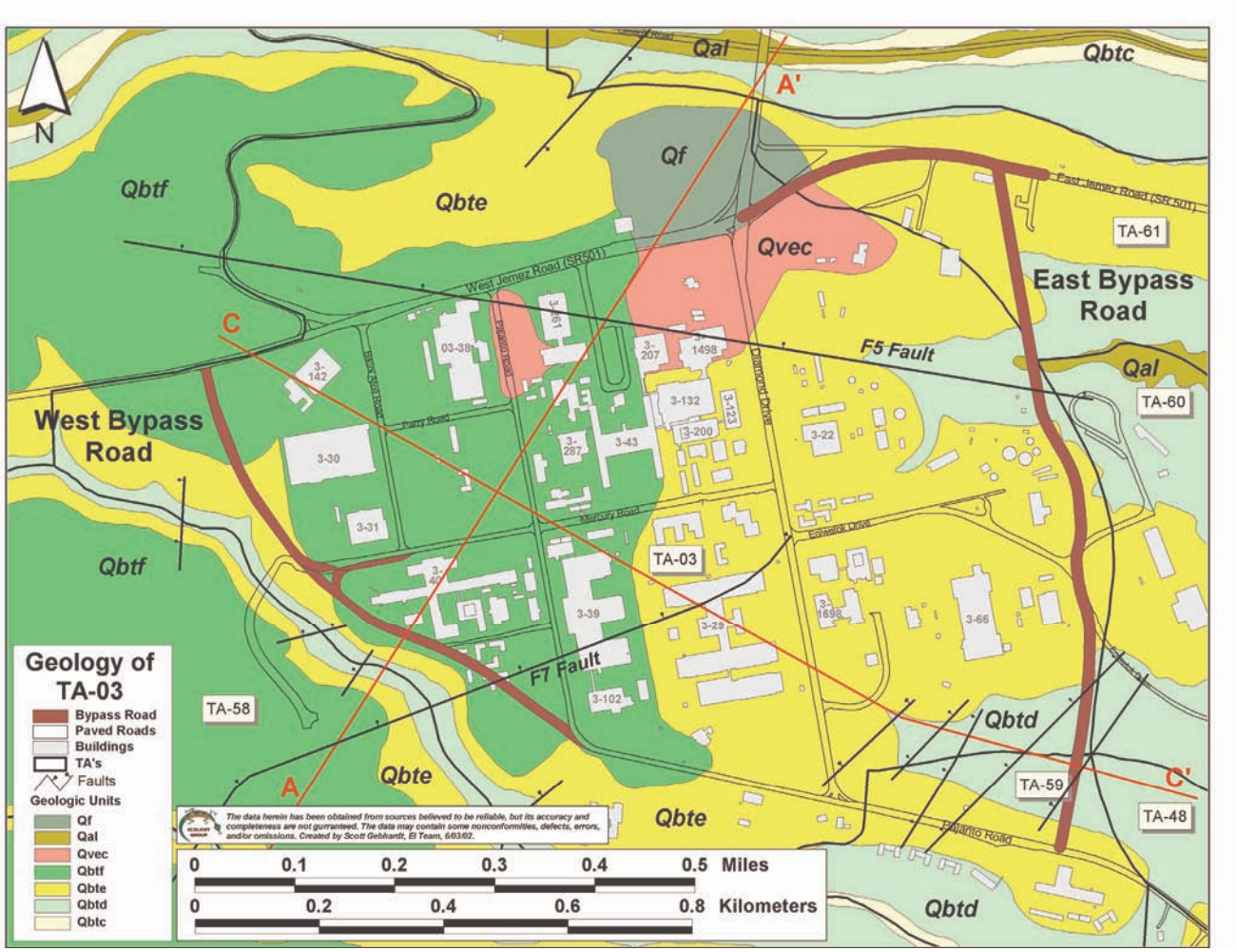

Figure 7. Simplified geologic map of TA-3 showing the locations of known geologic faults (bar and ball on down-thrown side). Red lines A-A' and C-C' are cross-sections depicted in Figure 8. (Data from Gardner et al., [1999] and Rogers [1995]).

The environmental consequences would be the same for both Option A and Option B. Building demolition, installation activities, and routine maintenance work planned under the Proposed Action would not be expected to have any adverse health effects on LANL workers. UC workers at LANL would not be directly involved in demolition, site clearing, earthmoving, heavy equipment operations, or installation activities. Non-UC support and maintenance contractors would be actively involved in demolition, installation, and maintenance activities under the Proposed Action. Approximately two NNSA workers and about 20 LANL workers would perform site inspections and monitor demolition activities during periods of peak activity. Applicable safety and health training and monitoring, PPE, and work-site hazard controls would be required for these workers.